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A

PLAIN AND FAMILIAR

TREATISE ON THE COW-POX,

DESCRIBING ITS

ORIGIN, NATURE, AND MODE OF INOCULATION,

(WITH A PLATE,)

whereby any person may distinguish the *Genuine* from the *Spurious* Kind—a distinction of the utmost importance; as the *one* Kind renders the body unsusceptible of the infection of the common Small-Pox, whilst the *other*, having only a *local* effect, leaves it still liable to that baneful disease.



extracted from the Writings of Drs. JENNER, WOODVILLE, PEARSON, &c. and of
Messrs. AIKIN, BELL, RING, &c. Surgeons;

WITH CONSIDERABLE ADDITIONS.

“All lawful means are to be used to preserve our lives; for not to preserve is to destroy.”
DODDERIDGE'S *Ethics*.

LEEDS:

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PREFACE.

1. **A** TREATISE on the Cow-Pox in a plain, easy and familiar style, and at a low price, seems to be much wanted; in order, if possible, to extend the happy advantages which a gracious Providence has been pleased to confer upon the world by so valuable a discovery.

2. 'Tis true, that several very excellent publications have appeared upon the subject; but the *general* usefulness of the greater part of them, has been lamentably curtailed by their authors' having placed them out of the reach of the *purses* or the *intellects* of the majority of mankind:—To remedy these defects has been my principal intention.

3. It may be urged, that such a publication is unnecessary; and that the attention paid by the Faculty totally supersedes it:—Far be it from me to undervalue the medical character—perhaps no person respects it more highly than myself. However, in spite of all the generous offers from the Faculty to inoculate the poor *gratis*; and the efforts of certain benevolent characters to encourage the practice, have we not still to lament, that Inoculation for the Cow-Pox does not gain that universal adoption which it merits? Do we not find the Small-Pox continue to commit dreadful ravages among an innocent race of sufferers?—And, it appears, that some other more effectual measures must be resorted to, before these helpless objects can be rescued from a premature grave.

4. I cannot imagine, that persons in *moderate* circumstances, *will* or *ought* to hesitate to employ the Faculty in the Inoculation of their children for the Cow-Pox:—Their extensive practice, accurate observation and superior skill, must insure to them a decided preference to all the books in the universe:—The confidence reposed in them, allays those anxious fears for our children's welfare, which parental tenderness is ever ready to suggest.

5. It appears to me, however, that *one* great obstacle to the progress of the Vaccine Inoculation is *ignorance* or *misunderstanding*:—The baneful effects of the common Small-Pox can never be very considerably lessened; nor can the devastating malady be eradicated from this island, till people become more intimately acquainted with the happy advantages derived from the Cow-Pox; and till every parent will as *readily* as he may *safely* inoculate his own children. It is an event devoutly to be wished, that the Small-Pox could be extirpated and repelled from our shores, with the same happy success as the Plague or Yellow Fever.

6. If Ministers of various denominations would exert themselves in promoting the Vaccine Inoculation, they would surely render a service very acceptable both to **GOD** and man:—Much is certainly in their power—and the pulpit would not be disgraced by their frequently explaining the propriety, and enforcing the practice as an incumbent duty:—Nay more, they are the fittest persons, after the Faculty, to employ the lancet on such occasions. Several Ministers in London have already undertaken to inoculate the children at the time of baptism; and Mr. Bell, in his excellent treatise on the Cow-Pox, mentions a Clergyman in Yorkshire, who had, in one year, inoculated 1500 with his own hand. Surely the hearts of such as have neglected this duty, must experience some remorse, whilst

performing the last sad rites of sepulture, over the numerous and lamented victims of the Small-Pox; when they consider, that Providence has graciously presented so easy and certain a preventive. I really hope that Ministers will take these melancholy facts into their serious consideration—Humanity and helpless infancy are pleading for it—and who knows but that HE *who forgets no work or labour of love*, may present an opportunity to those very children so preserved, of repaying the kindness either to them or their posterity?

7. Some readers may be ready to wish, that a number of cases had been brought forward, to prove that the Cow-Pox assuredly fortifies the body against the infection of the Small-Pox—indeed numerous instances of this nature might have been adduced, but they would have swoln the pamphlet beyond its original design.

8. The following is *one* amongst the many that might be produced—“About a year and a half ago,” says Mr. Bell, “the natural Small-Pox appeared in a large village in Scotland, accompanied with symptoms of the most alarming kind. The Surgeon of the place, considering this as a good opportunity to give a fair trial to the Vaccine Inoculation, and having prevailed on many to agree to it, the practice was immediately begun at the end of the village opposite to that in which the Small-Pox first made its appearance. With great satisfaction he found, that none of his patients suffered any inconvenience from the Cow-Pox—None of them took the Small-Pox; while scarcely any escaped the infection, who had not previously had the disease; and a great proportion of those, who were seized with it, died.”

9. Experiments have been made to prove the efficacy of the Cow-Pox, almost in all quarters of the globe. Patients have been exposed in all possible situations to the infection of the Small-Pox. They have undergone Inoculations without end—lived together in the same rooms, and slept together in the same beds—yet there does not appear *ONE single case* fairly made out, where the person has passed through the *Genuine* Cow-Pox, and been found insecure from the *virus* of the common Small-Pox. Enough has certainly been done, by way of trial, to satisfy the most timid, and convince the most sceptical objectors; provided they would take the trouble of a calm and attentive investigation.

10. The critical reader will apologize for all inelegancies of composition, when he recollects the remark of Horace—*Difficile est proprie communia dicere*.

11. Lastly—To whatever censures the writer may be subjected, he feels some consolation in the consciousness, that the present little tract is ushered to the public from the purest motives of benevolence, and with a sincere wish to contribute his mite towards the preservation of the valuable lives of the rising generation. Trivial indeed is the *good* that any of us is capable of performing, in comparison of the enormous mass of prevailing *evil*; but still this mortifying idea should not discourage us from the attempt. It is a circumstance truly humiliating, that *evil* should be so much easier to accomplish than *good*; however, in this state we *found* the world, and in this state, we shall, most probably *leave* it—far easier it is to burn a city than to build a house.

I. K.

LEEDS, 10th March, 1801.

ON

THE COW-POX.

CHAP. I.

On the Origin and Discovery of the Cow-Pox.

1. **T**HE origin of this disease, as far as relates to its immediate communication to the human body, must be ascribed to that very useful animal the Cow. Dr. Jenner, of Berkley, in Gloucestershire, informs us, that he first learnt the efficacy of the Cow-Pox in preventing the Small-Pox from the inhabitants of that county, in whose extensive dairies it appeared to have been long and very well known.

2. The Dr. paid some attention to the Cow-Pox upwards of twenty years ago ; and, in answer to his enquiries then made, he found the idea generally prevalent, that such as had passed through the Cow-Pox in their youth, were ever afterwards rendered secure from the infection of the common Small-Pox. He met with aged persons who assured him, that, having accidentally caught the Cow-Pox by contact, in their younger years, they had, during their whole lives, remained free from the Small-Pox contagion, though often subjected to its influence.

3. The Doctor also found that this fact had been handed down from parent to child, as positive and certain ; and that it was spoken of with such confidence by the good people, that he thought it merited his closer attention.

4. In the year 1796, he began to make some actual experiments upon the possibility of Inoculation for the Cow-Pox, and found that it succeeded to his fullest expectation ; and in 1798, he published a number of cases, with a view of exciting others to pursue the inquiry.

5. The Cow-Pox is a very common disease in the great dairies in the western counties of England, appearing upon the paps and udders of the cows in the spring and autumn months, and particularly when the weather is rainy ; and when the skin of the milker's hands happens to be chopped or broken, some of the matter from the Cow-Pock enters and communicates the disease.

CHAP. II.

The invaluable Utility of the Discovery of the Cow-Pox, and the Impropriety of neglecting it.

1. **T**HE value of every discovery must assuredly depend upon the real advantages that are likely to result from it. The *Cui bono?* or *What good will it produce?* is a measure very proper to be applied to every fresh discovery; and in exact proportion to the benefit which it promises, it ought to claim our attention.

2. But in a case like the present, where no less than the preservation of the lives of such an immense number of our fellow-creatures, and most of them helpless infants, is involved, the discovery is and *must* be invaluable.

3. The Rev. Samuel Partridge, A. M. Vicar of Boston, in Lincolnshire, has made a calculation of the deaths in his parish for the term of 54 years, from 1749 to 1802, (See his pamphlet entitled, *An Account of Baptisms, Burials, &c.*) in which he proves, that nearly one twelfth of those deaths had occurred from the Small-Pox, and that upon comparing the population of the united kingdom with that of his parish, there must have died of the same disease, within the same period, *One Million, Seven Hundred and Sixty-two Thousand, One Hundred and Thirty-five—or Thirty-two Thousand, One Hundred and Thirty-five*, every year. The Royal Jennerian Society, calculates the number of deaths annually to amount to *Forty Thousand!* How dreadful would be the number if applied to Europe, or the world!

4. But considering that the number of yearly deaths, occasioned by that fatal malady, is so great; and reflecting also, that a gracious Providence has been pleased to afford us the means of securing our offspring against the direful effects, how improper must be our conduct! nay, how can we escape criminality, if we neglect so noble and so incomparable a gift?

“ Whatever thy free bounty gives,
Let me not cast away;
For GOD is paid, when man receives,
T’ enjoy, is to obey.”

5. I have often lamented over the imprudence of many in not using the means which heaven has been pleased to put in their power, for the welfare of their children. It is well known, that what is called *taking the Small-Pox naturally*, is no other than the receiving of the infection from the breath, or perspiration, of some person labouring under that disease—we cannot believe that there is any supernatural interference. If we keep a child out of the reach of the infectious matter, it

will never have the disease:—So that it is commonly *we ourselves* that are accessory to a child's receiving the Small-Pox, either by inoculation, or by carrying, or permitting it to go, into an infected atmosphere. When a child receives the Small-Pox without having been near to any individual labouring under the disease, we are not to ascribe it to any supernatural agency, but to the circumstance of some person having inadvertently carried in his dress, particles of morbid matter, from some infected person or place, to the party receiving the disease.

6. It may be objected, that many of those persons who have not availed themselves of the Small-Pox Inoculation, have acted *from a principle of conscience*, not daring to do it, by reason of the danger that attended it. To this we might reply, —1. Every person who pleads *conscience*, is in duty bound to have that conscience well informed; otherwise, conscience might be pleaded for the most improper transactions; Paul persecuted the Church of Christ for conscience sake, and under that impulse sinned grievously.—2. The discovery of the Cow-Pox, removes all fear of danger, for not one case of death has yet occurred from that disease.

7. John Woolman, a Friend, in his journal, (Dublin edit. 8vo. 1794, page 116) after having considered *the Small-Pox as a messenger from the Almighty*, to be an assistant in the cause of virtue; and when hinting that *it requires in us great clearness of knowledge, that it is our duty to inoculate before we take upon us, in health, a distemper of which some die*, has the following very pertinent remark:—*Had HE (the ALMIGHTY) endowed men with understandings to hinder the force of the disease by INNOCENT means, which had NEVER proved mortal, nor hurtful to our bodies; such discovery might be considered as the period or end of chastisement inflicted by this distemper, where that knowledge extended.* Now upon the very principle of this truly worthy man, ought the Cow-Pox to be esteemed as the ALMIGHTY's gift, to put a welcome period to the sad visits of this mournful messenger—And why?—Because the means are *innocent*, and have *never proved mortal*.

8. Dr. Doddridge, in his Ethics, says, *All lawful means are to be used to preserve our lives; for not to preserve is to destroy. And if bringing any temporary disorder upon ourselves, may be the probable means of preserving life, virtue not only permits, but requires us to do it, though it may be attended with some hazard; provided that hazard be less than would arise from omitting it.* If such were the Doctor's sentiments upon the Small-Pox Inoculation, where *one case in three hundred is expected to prove fatal*, how clearly would he have expressed himself, had he lived to hail the discovery of the Cow-Pox.—He would then have said with confidence—*Not to preserve is to destroy!* Indeed the idea must be shocking to a parent's

feelings ; but still the fact is the same—Negligence in preserving, is tantamount to positive destruction.

9. Perhaps it may be proper to notice, under this head, the opposition which Inoculation for the Cow-Pox has met with from some few medical practitioners, who point out this and the other child, that, after having had the Cow-Pox, has taken the natural Small-Pox. In reply, we might ask them, 1.—Are you *sure* that the cases mentioned were not of the *spurious* kind? if they were, there is no wonder that they have taken the Small-Pox.—2. Have you considered that many practitioners have been as scrupulous as *yourselves* in the encouragement of the Vaccine Inoculation, and yet have been constrained by positive facts to alter their sentiments?—3. Have you duly reflected upon the evidences which stand forward in favour of the Cow-Pox—Gentlemen of the most accurate observation, penetrating genius, and respectable characters? (See the Medical Council to the Royal Jennerian Society.—4. Has not the bias in your minds prevented you from giving the Cow-Pox that calm and dispassionate notice which it deserves?—5. Lastly, Would not candor suppose it more probable, that *you* may be mistaken, rather than the most able and wise Physicians, resident in all the quarters of the world ; many of whom have tried the effects of the Cow Pox by every method which their imagination could suggest, and whose uniform testimonies confirm Dr. Jenner's modestly expressed hopes, that they would be found a safeguard against the variolous infection?

9. We might here adduce an extract from the valuable treatise written by Mr. Benj. Bell, Surgeon, Edinburgh.—“ *My father,*” says he, “ *Mr. Geo. Bell, in several journeys through England, within these last three years, and particularly in Gloucestershire, made it his business to inquire minutely into the degree of credit given by practitioners and the people of the country, to the antivariolous power of the Cow-Pox, and found them uniformly of opinion, that a person who has once had the genuine Cow-Pox, is ever afterwards unsusceptible of the contagion of the Small-Pox. It is proper also to add, that my father was one of those who rather declined recommending the Vaccine Inoculation, till more extended practice, and farther knowledge of the antivariolous powers of the disease, should warrant him to do so. From this circumstance, his opinion appears to me to have greater weight.*”

11. But objections do but urge more forcibly the necessity that all parents should be able to judge for themselves, whether the disease be of the *genuine* or *spurious* kind. A friend of the writer had a child that was inoculated five times before the real disease was communicated ; and the writer has now a little girl that has three times had the *spurious disease*—but a disease perhaps it ought not to be called ; as the general habit does not

seem at all to be affected by the local inflammation of the spurious kind:—However, he cannot think that he has done his duty, till he shall have tried yet again, or again, to obtain the genuine disease.

CHAP. III.

A comparative estimate of the Natural Small-Pox, Inoculated Small-Pox, and the Inoculated Cow-Pox.

1. **T**HIS estimate is nearly copied *verbatim*, from that circulated in London by the Royal Jennerian Society, established for the extermination of the Small-Pox; and patronized by their Majesties, and all the royal family—most of the nobility—the leading members of both Houses of Parliament, and a medical council comprehending the most noted practitioners in the United Kingdom.

2. The NATURAL SMALL-POX, has been known to continue its ravages for twelve centuries, destroying in every year an immense proportion of the whole population of the world—always contagious—sometimes mild; but for the most part violent, painful, loathsome and dangerous to life. ONE in six having this disease DIES:—at the least one half of mankind have it, consequently ONE in TWELVE of the human race perishes by this one disease!!—amounting in London to *three thousand* every year; and in the United Kingdom of Great Britain and Ireland to 40,000 annually.—ONE in three has the natural Small-Pox dangerously:—The eruptions numerous, painful, and disgusting; causing much confinement, loss of time, and expence—precautions are commonly unavailing—medical treatment necessary both before, and after the disease—leaves pits, scars, seams, &c. which disfigure the skin, and especially the face—is often followed by scrofula in every form; together with diseases of the skin, glands, joints, with frequent blindness, lameness, &c.

3. The INOCULATED SMALL-POX is always contagious—commonly mild; but in some instances is as bad as the natural kind.—In general ONE in *three hundred* DIES; perhaps in London ONE in a hundred—ONE in thirty or forty has it dangerously—eruptions constant; but the number uncertain. Confinement, loss of time, and expence sometimes considerable—preparations necessary by diet, and medicine—care required as to seasons, period of life, and state of constitution—medical treatment commonly necessary—deformities, and subsequent diseases to be apprehended, same as in the above, whenever the Pox proves to be of a bad kind.

4. The INOCULATED COW-POX.—Is not contagious—mild and inoffensive—seldom painful—free from danger. The

genuine kind is an INFALLIBLE security against the Small-Pox—NEVER FATAL.—Has only ONE pustule or pock, which is upon the inoculated part.—No confinement, loss of time, or expence—proper at all ages and seasons—no medicine required—no deformity of the skin, or face, nor any subsequent diseases.

CHAP. IV.

The Nosology—or the Description of the Cow-Pox as a Disease.

1. **I**T has been conjectured, that the Pox affecting the udders of Cows is derived from the grease in horses' heels; but this supposition does not gain countenance from many of the most judicious and respectable practitioners.

2. There is a soreness of the teats of Cows, appearing often when suckling their calves, occasioned or increased by the irritation of flies, or other external injuries; and which will even be communicated to the milkers; exciting much pain and uneasiness in their hands—often producing ulcers in both the cow and the human subject not very liable to heal:—Yet none of these sores will preserve a person from the infection of the Small-Pox.—It is proper to note that these ulcers never produce any general fever, &c.

3. The *real* pox, appearing upon the udders of the Cows is very different.—The pustules or pocks are at first of a pale blue or lead colour, with a depression or flattened dimple in their centre, surrounded with an erysipelatous inflammation (an inflammation occasioned by a clustering of small red spots or pimples)—The pustules contain a clear watery fluid; and the surrounding parts become hard.—If care be not taken to prevent them from being injured, they burst and run into a foul deep ulcer, which is slow of healing—sometimes the cow appears unwell, and rather impairs in her milk.

4. If the milker happen to have any skin off from his or her hands, the matter enters, and inoculates the person; and a pock is produced similar to that on the cow's teat, in a few days.

5. At first inflamed spots appear on the hands, joints of the fingers, or wrists; which soon form into pustules, and fill with a watery fluid; increasing for several days.—On the 5th or 6th day the pocks are found to contain a quantity of bluish fluid, are commonly circular, dimpled in the centre, and soon surrounded by an inflamed ring, often 2 inches in diameter.—On the 7th or 8th day the matter then formed on the pock begins to be taken up into the system—Swellings are found in the arm pits—quick pulse—sickness—flushings of heat, followed by cold. These symptoms continue with greater or less violence for 1, 2, or 3 days, and then regularly go off.—The hands

having matter upon them may fix pustules upon the nose, lips, or eyelids, by rubbing them, where the skin is extremely thin.

6. The Cow-Pox in its natural state, when propagated from the teat of an infected cow to the milker's hands, is capable of affecting the human species repeatedly, even to an indefinite number of times; but after the *first* application it is generally much milder in its symptoms;—thus it is evidently preferable, to get the matter from a human subject, rather than from the cow.

7. The Small-Pox secures a person from ever having the *genuine* kind of Cow-Pox; and the Cow-Pox fortifies the body in the same degree, against the Small-Pox.—In both cases, there may afterwards be some *casual* pustules, from infectious matter being absorbed by the vessels on the surface of the body;—the same as we often observe, upon the hands, arms, or breasts of nurses while attending upon children ill of the common Small-Pox:—The disease is then merely *local* and confined to the pock—and though matter may be produced in the pock, yet the system does not seem to take it up, so as to produce the fever and indisposition. Hence also it arises—that when all the servants of the dairy have taken the infection from the Cows—such of them as have before had either the real Cow-Pox, or the common Small-Pox will not be indisposed, but will have the *spurious* kind; while such as have never had either the real Cow-Pox, or the common Small-Pox, will be indisposed, and for a day or two be unable to attend to their work.

8. The medical journal No. 46, for 1802, gives the following very elegant and concise description of the disease, which embraces the whole of this chapter, and is compressible within a nut-shell.—“It is a circumscribed, elevated, solitary vesicle, nearly circular at its basis; having a regular smooth circumference, but is flattened in its apex; surrounded about the 10th day with an erysipelatous efflorescence; afterwards desiccating into a brownish, hard, glistening incrustation; which soon falls off, and leaves a cicatrix through life.”—But this language is not adapted to the generality of mankind.

CHAP. V.

The manner of performing the inoculation for the Cow-Pox.

1. **T**HE first thing is the *choice of matter*; and it is to be feared, that errors have been frequently made in this respect by medical practitioners. For in the *common Small-Pox*, the matter taken is always *thick and white* like cream; but in the Cow-Pox, the matter must be *thin, clear, and limpid* like water. From the *fifth* to the *ninth* day after inoculation, if it be the genuine kind, the matter is fit for use:—It is *thin and clear*; but after that period it becomes *thick and*

white, and will be ready to produce an ulcer or the spurious disease; but never the right and genuine kind. In the plate, fig. 6, genuine kind, there is a ring, or areola, discovered round the inoculated point—*this areola*, says Dr Jenner, *is a mound over which the lancet must not pass*—That is to say, matter should never be taken from a Cow-Pock pustule for the purpose of inoculation, after the efflorescence or circumscribed redness is formed round it. Matter, taken after this period, does not secure the patient from the Small-Pox contagion; as it does, with certainty, when taken earlier; and to this circumstance, practitioners and parents cannot pay too much attention; as the whole, both of success, reputation and security, depends upon it. The *thin clear* matter is contained in a number of cellules, or very small cells, united together something like a honeycomb; so that the pock will not be emptied of ALL the matter till every cellule be pierced.

2. The part commonly chosen for inoculation, is the small hollow in the arm, between the elbow and shoulder. Pierce the pock with the point of a fine penknife or lancet, and the *thin, clear, watery* matter will be seen to ooze out; collect it upon the point of the instrument; and, when possible, apply it *immediately* to the subject for inoculation, even before it be dry—with the point of the instrument prick the arm, or just scratch it lengthwise, till a tinge of blood appear; holding the lancet rather in a declining position, so that the matter may run from the point, and leave it free to perform the incision. As soon as the tinge of blood appears, or the wound is supposed to be deep or large enough, then change the position of the lancet, and let the matter run down it into the incision—Let it dry on, and the inoculation is finished.

CHAP. VI.

The Disease shewn in its various Stages, with Reference to the Plate.

GENUINE KIND.

Fig. 1. **E**XHIBITS the appearance of the inoculated spot, the beginning of the *third* day, or 48 hours after inoculation—a small inflamed spot with the puncture in its centre, and a slight swelling may be seen or felt.

Fig. 2. The *Fifth* day—just beginning to form the pock with the matter in its vesicles—the swelling and hardness increased.

Fig. 3. The *Eighth* day—The inflammation now begins to spread rapidly round its base; the swelling and hardness are increased also: Sometimes the symptoms of rapid increase may appear on the *seventh* day—The whole body begins to be af-

fectured at this period, from the matter formed in the pustule having been taken up and mixed with the circulating fluids. Slight symptoms of fever are produced, such as thirst, startings when asleep, &c. attended with a small degree of pain in the arm-pits. All these symptoms are commonly too trivial to require any medical aid; and seldom continue longer than 24 hours.

Fig. 4. The *tenth* day—now at the height—Inflammation and hardness considerable—often two inches in diameter.

Fig. 5. The *eleventh* day—Inflammation and hardness rather begin to abate—matter becomes *white and thick*, and top of the pock brownish.

Fig. 6. The *twelfth* day—shews the double areola, or ring, in its most perfect state; which appearance at this period, is the most certain sign of the *genuine* kind: But even, if the rings do not appear so distinct, if the pustules come to maturity *at this period*, still the disease is right.

Fig. 7.—The *fifteenth* day—The brown scab is dried up, and may be expected to loosen and separate in a short time.

We now refer to the SPURIOUS KIND.

A. Shews the inoculated part on the *third* day as forward as the *real* kind is on the *eighth* day.

B. The *fourth* day—equal to the *ninth* day of the *genuine* kind.

C. The *fifth* day—as far advanced as the other is on the *tenth* day.

D. The *sixth* day—nearly at its height.

E. The *seventh* day—rather upon the decline, answers to the *twelfth* day of the *genuine* kind.

F. The *eighth* day—corresponding to the *fourteenth* or *fifteenth* day of the *real* disease.

Additional Remarks upon the Plate.

1. The single Pock placed in the middle of the plate, between the genuine and spurious rows, with this circumscription:—*Fig. 3—eighth day by incision*, is meant to point out the different forms, or shapes, which the pustules assume from different modes of performing the inoculation. When the operation has been performed by a puncture, or a small wound like the prick of a pin, then the pustule will wear a *circular* form through all the various stages of the disease;—but if the inoculating wound be made rather *long*, like the scratch of a pin, then the pock will always wear an *oval* form; and resemble in all the stages the above mentioned middle pock, marked *fig. 3*, by incision.

2. Both the genuine and spurious kinds will be found occasionally to vary in their appearances from the plate; but these

variations will never be so great, as to produce any risk of a mistake, in distinguishing the *genuine* from the *spurious* disease; and for this plain reason, because the genuine kind does not come to its height till the *tenth* day; while the spurious pustule arrives at its height, both of swelling and inflammation, on the *sixth* day.

CHAP. VII.

Sundry Remarks, and Recapitulation.

1. **W**HEN matter is wanted to be conveyed to any distance, or kept for some time, the grand point to be gained, is to *preserve it from the action of the air*; which tends to destroy its efficacy. Some have succeeded by charging a little thread or cotton wool with the matter and inclosing it in a very small phial bottle, keeping it well corked or sealed. Dr. Carro, of Vienna, received a bit of charged thread inclosed only in a letter, from Dr. Pearson, of London, and still found it to produce the disease.

2. But perhaps the best way is, to have two flat equal sized pieces of glass, to collect the watery fluid from the pock, and then, whilst wet, join the pieces of glass together, which, upon the matter drying; will adhere. Wrap up the pieces of glass, containing the wet matter between them, in a little tin-foil or moistened bladder, which may be thus conveyed to any distance, or kept for any time; and when used, must be previously moistened in the steam arising from warm water.

3. But it is always preferable, to have a constant succession and supply of fresh matter; and for this end, a few patients should only be inoculated at the same time, and then others from them, and so on.

4. It is much the best to inoculate both arms at the same time, and never to take away *the whole* of the matter—indeed, considering that each pustule consists of a number of small vessels or cells, the probability is, that *ALL* of them will not be ruptured readily with the point of the lancet.

5. This idea, however, seems necessary to be impressed, that the *whole body* wants to be secured, and therefore the *whole body* should be brought to feel the effects of the morbid matter. We hinted before, that the matter formed in the pustule *ought* and *must* be absorbed and circulated through the system, in order to excite the desirable fever from the 8th to the 10th day: And as this absorption of the matter seems indispensibly necessary in order to secure success, care should be taken that the tops of the forming pocks be not rubbed off; rather tie down the child's hands.

6. When there is plenty of good matter, and the desire of getting the inoculation to take place is urgent; then it is proper to perform the operation two or three times in the course of a few days. The part that comes first to maturity, will put a final issue to the rest.

7. It may sometimes be necessary to inoculate several times before the real disease be produced. The reason, why the same matter produces in one subject the *genuine* kind, and in another the *spurious* kind, seems not to be ascertained. Most probably there is some peculiar power existing in the constitution at one time, more than another; which limits the matter to the local affection of the pock.

8. Infants of the age of two or three weeks, do not readily take the disease.

9. It is supposed, that about *one* person in *sixty*, will not take the Cow-Pox infection.

10. The inflammation proceeds more rapidly in summer than in winter.

11. If about the height of the disease, the fever should run high and the inflammation become much greater than expected, a gentle purgative may be given:—Senna tea sweetened with manna, or a little rochelle salt with syrup of violets, might be found to answer the end desired—but these occurrences are but rare.

12. If a person has once had the genuine Cow-Pox, or the common Small-Pox, and be inoculated again with the Cow-Pox matter, if any effect be produced, it will invariably be of the *spurious* kind.

13. In performing the inoculation, take care that the instrument be clean and not rusty. Let the wound made be just deep enough to fetch a tinge of blood, and no more: Should it be made *too deep*, there may be reasons to apprehend, that the pock will not heal up so kindly as might be wished; and that the blood issuing from the little wound may wash out the matter, and prevent infection.

14. If the pustule should have inflamed too much, and incline to a bad sore about the 15th day, let it be sprinkled every 48 hours with a little powder of burnt alum; but there will commonly require nothing more than a little mild ointment—a little *elder ointment* will do as well as any other.

15. We suppose it may not be advisable to inoculate for the Cow-Pox during severe fits of teething; nor while labouring under any eruptive malady, as measles, scarlet fever, or itch; and assuredly not in bad fevers, or other dangerous complaints.

Recapitulation of the most interesting Particulars.

16. Ever bear in mind, that all *matter* must be taken from the *genuine* pock, and between the *fifth* and *ninth* days—that it must be *clear*, *limpid*, and *transparent as water*—and if possible used *immediately*; or, at least, kept from the air.

17. In performing the inoculation, just make a tinge of blood to appear, then let the matter run into the wound and dry on.

18. The *true* and *genuine* pock will not come to its height of swelling and inflammation before the *ninth* or *tenth* days—and all the other kinds are of no service whatever. The inoculator ought, therefore, to see his patient at least every third day.

POSTSCRIPT.

Some have objected to the *Cow-Pox*, fearing lest it should introduce a new disease into the human frame—To this, we reply,—1. The *Cow-Pox* has been long known in the dairy counties, and no such inconvenience has yet been found to arise from it.—2. Do not we daily eat her flesh, and drink her milk?—3. May it not be supposed, that the *Cow-Pox* has been originally the same disease as the *Small-Pox*; and that its virulence is diminished by passing through the milder fluids of that clean, and useful animal; and especially, as it nearly runs the same course, and equally fortifies the body against any future attack?

In the preceding part of these pages, we noted the circumstance, that a child might sometimes require the *Cow-Pox* Inoculation to be repeated several times before the *genuine* disease was induced. This is certainly true; but we must also add, that such occurrences are not frequent. Most commonly the *real* disease will be produced, if the matter has been taken at a proper period. And, it is it highly important, that, when the *spurious* kind does appear, it should be duly marked; otherwise the utility of the *Cow-Pox* may be seriously diminished, and the gracious designs of the GREAT AUTHOR of nature frustrated; who in presenting us with so safe and easy a preventive, has undoubtedly intended it as the termination of that fatal malady, which has for so many centuries ravaged the world.

FINIS.

8. 11. 1989

